ENVIRONMENTAL ASSESSMENT

FOR

NATCHEZ TRACE PARKWAY BRIDGE REPLACEMENTS OVER OLD CANTON AND RICE ROADS MADISON COUNTY, MISSISSIPPI

Prepared by the
U.S. Department of Transportation
Federal Highway Administration
Eastern Federal Lands Highway Division

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Prepared for the
U.S. Department of the Interior
National Park Service
Natchez Trace Parkway

Prepared pursuant to the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (43 CFR 1500)

ABSTRACT

This Environmental Assessment (EA) addresses the plans of the National Park Service (NPS) to perform needed lengthening of bridge spans on Natchez Trace Parkway over Old Canton and Rice Roads in Madison County, Mississippi. The preferred alternative proposes to replace the existing bridges on Natchez Trace Parkway over Old Canton and Rice Roads, complete associated bridge approach work and widen, Old Canton Road and Rice Road under and in the vicinity of these bridges. If the existing bridges are not replaced, it will hinder the proposed planned widening of these public roads.

The Park's goal in identifying a preferred alternative is to maintain the existing access to the historic Natchez Trace Parkway, while providing an adequate thoroughfare crossing under the Parkway. The Park would like to accomplish this goal without diminishing the visitor experience, the interpretive value and the historic importance of the Natchez Trace Parkway, or Park resources, while accommodating the needs of adjacent localities to improve their infrastructure.

This document determines which aspects of the proposed action have potential for social, economic, or environmental impact. It also identifies measures that may mitigate adverse environmental impacts. The review of the No Action Alternative is also presented. Public involvement and coordination/consultation with other Government agencies is summarized in this document.

This document is prepared pursuant to the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act (NHPA), Section 7 of the Endangered Species Act (ESA), the Clean Water Act (CWA), and Executive Orders protecting wetlands and floodplains.

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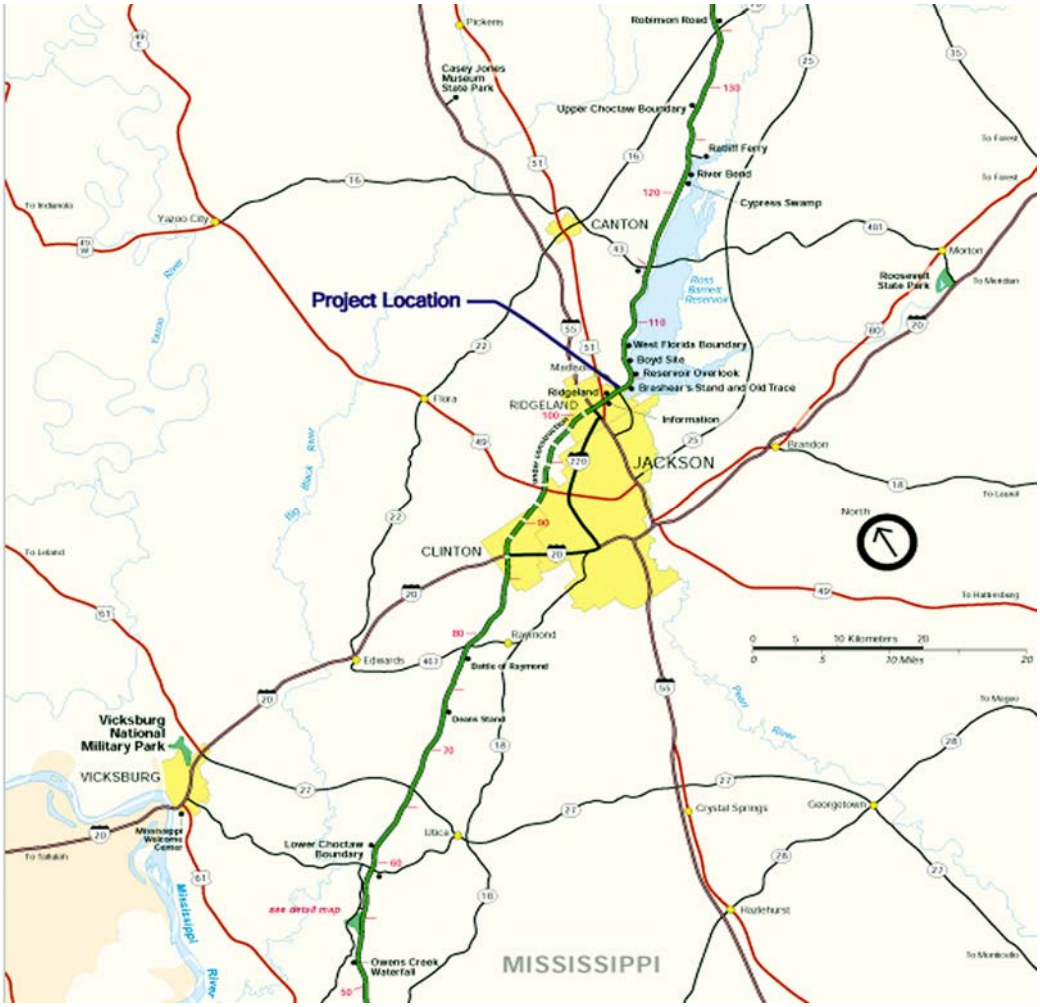
I. Purpose and Need For the Action

A. Project Location

The project area consists of two locations on the Natchez Trace Parkway at approximately Mileposts 104 and 105, in Madison County, Mississippi. The first site is the Natchez Trace Parkway bridge over Old Canton Road at approximately Milepost 104, northeast of Ridgeland, Mississippi.

The second project site is Natchez Trace Parkway bridge over Rice Road at approximately Milepost 105. The Old Canton and Rice Roads are currently 2-lane section roadways and planned to be widened to 4-lane facilities, by the local jurisdictions..

Location Map



B. **Description of Proposed Action**

The National Park Service proposes to replace the Natchez Trace Parkway bridges over Old Canton and Rice Roads, in Madison County, Mississippi. The project also includes widening of Old Canton Road and Rice Road under and in the vicinity of these bridges.

Above: View of Natchez Trace Parkway Over Old Canton Road. Looking Northbound toward Topelo.

Above: View of Old Canton Road under Natchez Trace Parkway.

C. **Need for Proposed Action**

In early 1990, Madison County was the fastest growing county in the state of Mississippi. From 1990 to 2000, County's population growth was 38.8%. The project is located south of the City of Ridgeland, Madison County's largest city and commercial hub of the County. The presence of Northpark mall and nearby

Above: View of Rice Road under Natchez Trace Parkway

Jackson, has fueled growth in the area and thus need for improvement to the transportation network. The Old Canton Road and Rice Road are designated as principal arterials facilities in the County's Transportation Plan and planned to be widened as four lane facilities. The Comprehensive Plan for City of Madison shows Old Canton Rod average daily traffic growth from 7,700 vehicles per day (vpd) in 1995 to 22,300 vpd by the year 2020. The planned road network along with planned bike and multi-use trails are necessary to maintain economic growth, reduce congestion and provide safe and efficient multi-modal system for the area. If Old Canton Road and Rice Road are widened north and south of the Parkway, without completing the section under and in the vicinity of the Parkway, it would increase congestion in the area and lead to unsafe merge and traffic flow.

Above: View of Old Canton Road under Natchez Trace Parkway.

As shown in the Old Canton and Rice Roads pictures, the bridges would need to be replaced to accommodate the proposed widening of these facilities, from existing 2-lane roadway to a 4-lane section with a bike trail. The existing bridges on Natchez Trace Parkway over Old Canton and Rice Roads, constructed in 1968, have a span of 30 and 33 feet respectively, with a curb-to-curb width of 28 feet. With corrective actions and regular maintenance, the current bridges have useful life of another 20 years.

The existing bridge spans of 30 to 33 feet cannot accommodate the proposed 4-lane section roadways with multi-use trail. To assist the localities improve their infrastructure, it is imperative that these bridge spans be widened.

D. Decisions to be Made

The National Environmental Policy Act of 1969 (NEPA) requires consideration of the environmental effects of proposed Federal actions. This Environmental Assessment (EA) provides the required environmental, and socioeconomic analysis for the proposed work. As part of the planning and analysis, this EA has been prepared to evaluate alternatives and options for accomplishing this work with the least impact to Park resources and Park visitors. The Eastern Federal Lands Highway Division of the Federal Highway Administration has prepared this EA in cooperation with the National Park Service.

The National Park Service intends to explore alternatives regarding how best to accommodate the increased traffic demand on county roads and localities' need for infrastructure improvement. The need to widen the bridge spans to accommodate 4-lane section roadways under Natchez Trace Parkway, without diminishing the visitor experience, the interpretive value and importance of the Natchez Trace Parkway, or other Park resources is important to the National Park Service. After the alternatives have been fully evaluated and the public has had an opportunity to review and provide comment on the proposed action, the National Park Service will issue a decision on how they will proceed.

E. Scoping and Issues

Issues and concerns related to reconstructing the bridges were identified by the Park, State and other Federal agencies, through similar NPS road projects. Issues specific to the reconstruction of the Rice Road and Old Canton Road bridges relate to proposed bridge reconstruction methods and the construction of temporary detour roads that may potentially affect area's natural resources, including wetlands, soils, and special status species (threatened, endangered, species of concern, and designated critical habitats). The affects of bridge replacement on the integrity of the Parkway, Parkway use, and Park operations are also of concern.

F. Issues Evaluated in Detail

Specific impact topics were developed to address potential natural, cultural, and social impacts that might result from the reconstruction of the bridges. These topics are derived from the issues identified above and address federal laws, regulations and orders, Natchez Trace Parkway management documents, and NPS knowledge of limited or easily impacted resources. They are used to focus the information presented and discussed in the affected environment and environmental consequences sections. A brief rationale for the selection of each impact topic is given below:

1. Biotic Communities

The 1969 National Environmental Policy Act (NEPA) calls for an examination of impacts on the components of affected ecosystems. NPS policy requires the protection of the natural abundance and diversity of all the Parkway's naturally occurring communities. Impacts to resources such as soils, vegetation, and general wildlife are included in this topic.

2. Special Status Species

Section 7 of the Endangered Species Act directs all Federal agencies to use their authority in furtherance of the conservation of rare, threatened, and endangered species. Federal agencies are required to consult with the U.S. Fish and Wildlife Service (FWS) to ensure that any actions authorized, funded and/or carried out by the agency does not jeopardize the continued existence of any listed status species or critical habitat. Protection and preservation of special status species at the Park are of critical importance and would be discussed as part of this analysis.

3. Water Quality

NPS Management Policies (1988) require protection of water quality consistent with the Clean Water Act. The proposed project involves replacing a culvert and installing a new culvert, which would encroach into wetlands. The stream encroachment is limited to replacing an existing culvert and placing riprap.

4. Wetlands

Executive Order 11990 (Protection of Wetlands) requires an examination of impacts to wetlands. Field delineation of wetlands and open waters at both project sites was performed during the fall of 2000. Vegetation, soils, and hydrology were examined for evidence of wetland characteristics using the Cowardin Classification System for Classification of Wetlands and Deepwater Habitats (USFWS, 1979) and the methodology outlined in the Corps of Engineers Wetlands Delineation

Manual (January, 1987). The study results will be discussed further in this document.

5. **Cultural Resources**

The National Historic Preservation Act of 1966, the National Environmental Policy Act of 1969 (NEPA), the 1916 NPS Organic Act, NPS Management Policies, and NPS -28 require Federal agencies to consider the effects of their proposed actions on cultural resources.

The NPS, in consultation with the Mississippi State Historic Preservation Officer, has reviewed the Rice Road and Old Canton Road bridges project. The setting of the Natchez Trace Parkway is managed to ensure that Park visitors are afforded a continuous, serene and recreational travel experience, highlighted by the traditional rural landscapes along its route. Protection and preservation of cultural resources at the Park are of critical importance and will be discussed as part of this analysis. Perpetuation of these aesthetic characteristics of the Parkway's cultural landscape is an important design consideration of the current project. Therefore, in accordance with 36 CFR 800, an assessment is required of the effect that bridge replacement would have on these historic structures and other potential cultural resources in the project area.

6. **Parkway Operations**

Daily Park operations may be impacted by bridge closures or traffic delays during construction.

7. **Public Use and Transportation**

The Rice Road and Old Canton Road bridges are critical links that allow for visitor use and enjoyment of the Parkway. These roads serve a critical transportation need of the area. The current bridges spans are inadequate to meet the required needs to widen Old Canton Road and Rice Road. Failure to take action in the foreseeable future could result in traffic congestion and impediment to other road improvement projects.

G. **Definitions:**

1. Temporary Impacts: Impacts anticipated during construction only. Upon completion of the construction activities, conditions are likely to return to those that existed prior to construction.

2. Short-term impacts: Impacts that may extend past the construction period, but are not anticipated lasting more than a couple years.

3. Long-term impacts: Impacts that may extend well past the construction

period, and are anticipated to last more than a couple of years.

4. Negligible: Little or no impacts (not measurable).

5. Minor: Changes or disruptions may occur, but does not result in a substantial resource impact.

6. Major: Easily defined and measurable. Results in a substantial resource impact.

7. Impairment – An impact that would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values.

H. Permits

The U.S. Army Corps of Engineers has regulated activities in the nation's waters since 1890. Until the 1960's, the primary purpose of the regulatory program was to protect navigation. Since then, as a result of laws and court decisions, the program has been broadened to encompass the full public interest for both the protection and utilization of water resources. Regulatory authority and responsibilities of the Corps of Engineers includes Section 404 of the Clean Water Act (33 USC 1344). This includes regulation of the discharge of dredged material into waters of the United States, including both navigable waters and adjacent wetlands. In addition, Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) is regulated by the Corps of Engineers for activities in or affecting navigable waters. Since the actions proposed may impact waters which are considered waters of the United States, the proposed action is subject to U.S. Army Corps of Engineers review under the 404 regulatory program.

The U.S. Fish and Wildlife Service has advised the Federal Highway Administration that the project as proposed will have, "1) No Significant adverse wetland impacts, and 2) No listed, proposed or candidate species are present within the project limits".

II. Alternatives

A. Description of Alternatives

The NPS proposes to replace the Natchez Trace Parkway bridges over Old Canton and Rice Roads in Madison County, Mississippi. The bridge replacements are necessary to provide longer bridge spans to accommodate the planned widening of Old Canton and Rice Roads by the local jurisdictions. The following is a description of the proposed alternatives, including the no action alternative.

1. No Action Alternative

Under the No Action Alternative, no improvements to the existing bridges on Natchez Trace Parkway over Old Canton Road and Rice Road would occur. The existing bridge structures would remain in place that can accommodate only the existing 2-lane roads. Rice Road and Old Canton Road may be widened in the vicinity of the bridges but remain two lane facilities under the bridges. No substantial improvements would be performed other than routine maintenance operations. Widening of Old Canton Road and Rice Road may not provide full utilization, if these facilities are not widened for their full length including the widening under the bridges. Additionally, if these roads are widened north and south of the Parkway, but allowed to remain only two lanes under the Parkway, safety problems could occur due to merge problems and congestion due to capacity reductions. The No Action Alternative would also impede the construction of planned local multi-use bike trail and connection to the bike trail on the Parkway.

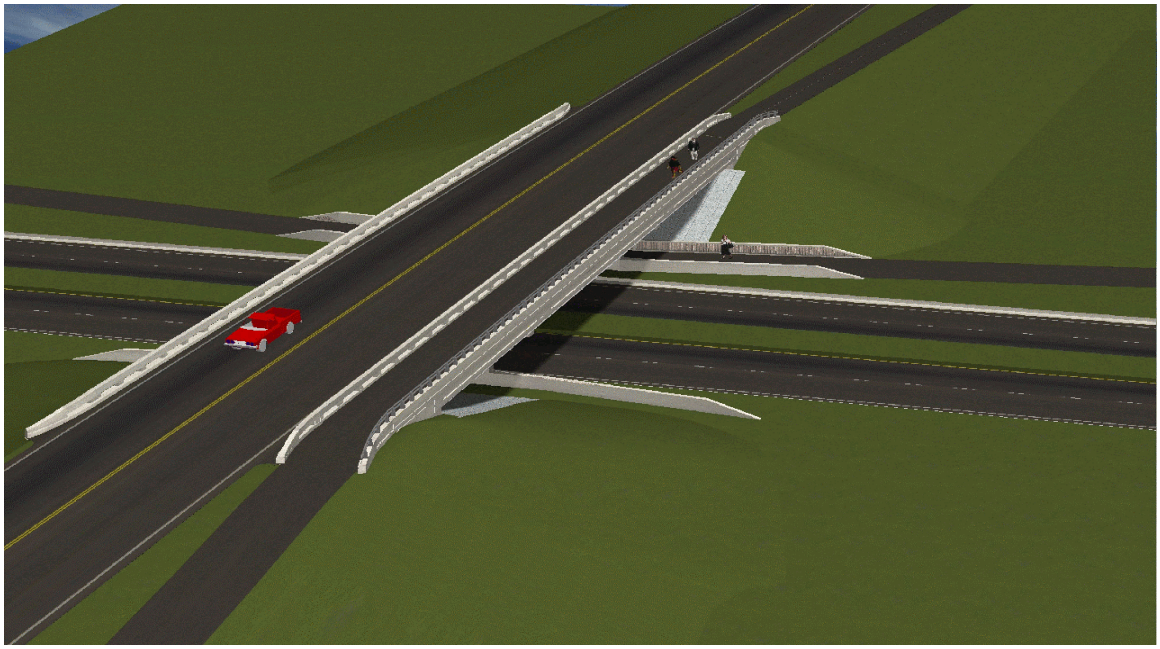
2. Build Alternative (Preferred Alternative)

The build alternative proposes to replace the existing bridges on Natchez Trace Parkway over Rice Road and Old Canton Road with spans long enough to accommodate a 4-lane roadway section and adjacent bike trail under each bridge. The proposed action will have Old Canton Road and Rice Road constructed to 4-lane section roadway with bike trail under and in the vicinity of the bridges. The Parkway would remain essentially in the same condition, a 2-lane roadway facility. The construction of a 120 meter long and 6.40 meter wide detour road from Post Road to the Parkway would be required to allow access to the Parkway during the construction of bridge over Rice Road. The proposed action would permit the widening of these roads to their planned capacity including the bicycle and recreational trail access to and from the Parkway.

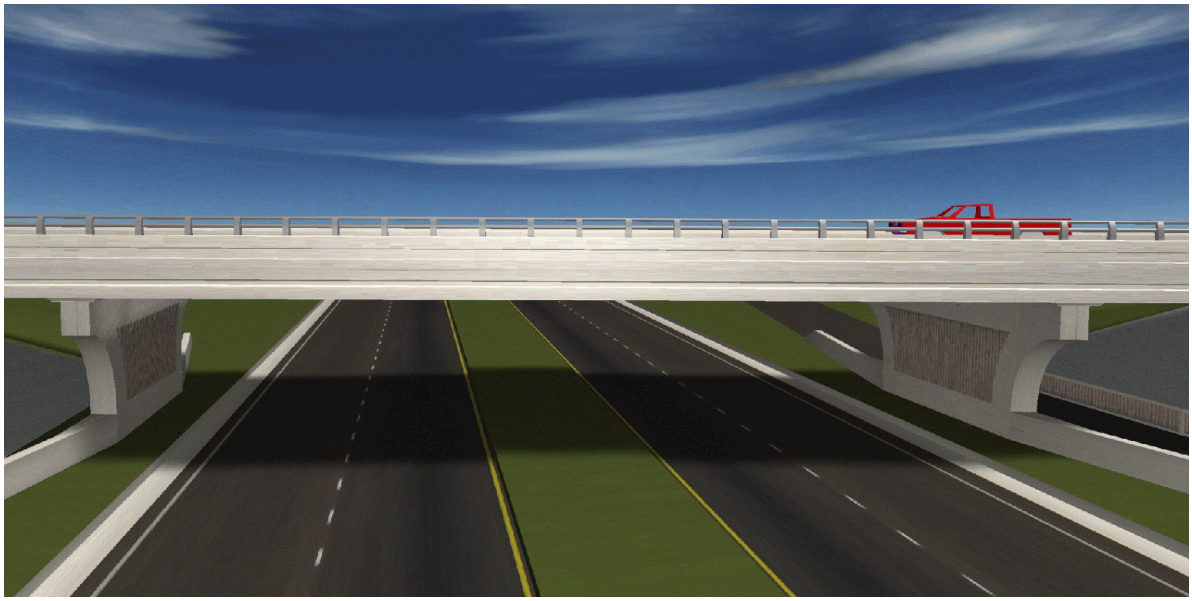
The Build Alternative is the most environmentally preferred alternative, while meeting the project purpose and need. The Build Alternative would provide for the preservation and enhancement of the Park's natural, historic, and cultural resources; maximize protection of the biological and

physical environment; and maintain visitor use and enjoyment of the Park. The Build Alternative would potentially impact some vegetation and minor encroachment into the wetlands; it is believed that through mitigation and use of best management practices, any impacts to the natural environment would be minimized and considered insignificant.

The following drawings provide conceptual views of the proposed typical section for each of the bridge replacement sites.



Above: Conceptual View of the Natchez Trace Parkway Bridge over Old Canton Road



Above: Conceptual View of the Old Canton Road under Natchez Trace Parkway Bridge

Above: Conceptual View of the Natchez Trace Parkway over Rice Road

Above: Conceptual View of Rice Road Under Natchez Trace Parkway

III. Affected Environment

A. General Environmental Setting

The Natchez Trace Parkway (NATR) is approximately 444 miles in length, and crosses three states on its route from Natchez, Mississippi to Nashville, Tennessee. This bridge replacements project is located on two locations on the Natchez Trace Parkway at approximately Mileposts 103.5 and 104.8 over Old Canton and Rice Roads in Madison County, Mississippi. The project is located in a suburban setting, planned for low-density residential and general commercial. The project area referenced in this document includes an approximately 1000 feet wide strip from southern property boundary of the Parkway at the subject roadway to the northern property boundary of the Parkway.

The Park occupies 51,750.15 acres, which include 51,680.64 acres of Federal land and 69.57 acres of non-federal land.

The climate of central Mississippi is generally mild with moderate temperatures. Winter is usually cool and damp with occasional warm periods. Spring and autumn are mild and warm.

B. Natural Resources

1. Vegetation

Rice Road: Undisturbed upland areas in the Park, from southern property boundary to the northern property boundary, are dominated by oak-pine, choke cherry, water oak, sweetgum, red cedar, and winged elm in the canopy and sub-canopy. The canopy tend to be dominated by loblolly pine. Privet, sugarberry, deciduous holly and windged elm tended to dominate the shrub strata. Poison ivy, Japanese honeysuckle, and slender spikegrass species represent herb strata within the project site.

Old Canton Road: Undisturbed upland areas are dominated by the mixed hardwood and pine forest with mature loblolly pine, choke cherry, water oak, sweetgum, and American elm in the canopy and subcanopy. Privet, choke cherry, and winged elm represent shrub strata and poison ivy, slender spikegrass are dominant species in the herb strata. Vegetated wetland areas included oak-gum-elm forested community with water oak, American elm and sweetgum. The areas with prolonged waterponding is dominated by sugarberry, American elm, water locust and green ash.

2. Threatened and Endangered Species

The U.S. Fish and Wildlife Service, in their letter dated January 22, 2002, has indicated that no listed, proposed or candidate species are present within the project area.

3. Birds, Fish and Wildlife:

Parkland provides habitat for a wide variety of wildlife species including mammals, birds, reptiles and amphibians. Principal mammals include deer, rabbits, foxes, and raccoons. The variety of birds, include mourning doves, woodpeckers, and turkeys. Reptiles and amphibians, such as snakes and turtles also occur within the project area.

C. Wetlands:

Rice Road: The National Wetland Inventory (NWI) map shows no mapped wetlands within the project area. The field delineation of wetlands indicated Cowardin classification PFO1C in southeast part of the project. However, these wetlands are outside of the proposed project construction limits.

Old Canton Road: The National Wetland Inventory (NWI) map shows several mapped wetlands near the project area, however, no mapped wetlands are depicted as occurring within the project area. The field investigation identified jurisdictional areas within the project site as seasonally to temporarily flooded forested wetlands, intermittent stream channel and perennial stream channel. All areas appear to fall within, and fed hydrologically by Brashears Creek. The mapped wetlands include PFO1A, PFO1C, R2UB2/3C and R4SBA. The proposed grading is anticipated to encroach approximately 0.08 acres of wetlands. The wetlands provide functions of flood storage and wildlife habitat.

C. Physical Environment

1. Air Quality

The State of Mississippi monitors for PM10 particulates, Ozone (O3), carbon monoxide (CO), sulfur dioxide (SO2), lead and acid precipitation. The State does not monitor for nitrogen oxide (NO2). According to the Mississippi Department of Environmental Quality, Office of Pollution Control, the State has been in attainment for all criteria pollutant since the inception of the monitoring program. Attainment indicates that a criteria air pollutant meets acceptable health-based levels of the national ambient air quality standards (USEPA 2001).

2. Water Quality/Hydrology

Rice Road: The site is located within the Brashear Creek watershed. The watershed for the Project Area is less than one square mile, and the poject area would be considered within the headwaters of the intermittent stream. Listed hydric soils for the property must be seasonally flooded to meet the

hydric soils criterion. It does not appear that a seasonally high groundwater table contributes to wetland hydrology. The Project Area would not be considered within the headwaters of Brashear Creek. Majority of the site appears to be in relatively flat to rolling terrain, with no evidence of surface water present. One mapped intermittent stream is located along the northern Park boundary in the vicinity of Rice Road. Site hydrology appears to be from a combination of upland runoff, overbank flooding, and groundwater discharge. All waters occur within a floodplain geomorphic setting, within a small, intermittent drainage.

Old Canton Road: The site is located within the Brashear Creek watershed. The Brashear Creek is mapped as perennial stream with a watershed of over 5 square miles. The Project Area would not be considered within the headwaters of Brashear Creek. Jurisdictional areas were observed within the seasonally to temporarily flooded forested wetlands, intermittent stream channel and perennial stream channel. Site hydrology appears to be from a combination of upland runoff, overbank flooding, and groundwater discharge. All waters occur within a floodplain geomorphic setting, within a small, intermittent drainage.

Water quality criteria for the State of Mississippi, adopted November 12, 1974, specified general and minimum conditions followed by specific water quality criteria based upon use. The parameters for which criteria were established include dissolved oxygen, PH, temperature, bacteria, specific conductance, dissolved solids, taste and odor, phenolic compounds, and toxic substances. Comparative or analytical data are not available for this assessment. It is assumed that the quality of these waters meets or exceeds the State criteria.

3. Soils/Geology

The geology in the vicinity of the proposed replacement bridges consists of recent wind and river deposited surface soils overlying older sediment formations. The most recent deposits consist of alluvial silts, sands and gravels within the flood plains of the Pearl River and its tributaries. Areas of older stream terrace deposits of red sand and gravel and a surficial formation of weathered loess (wind-blown silt and clay) exist at higher elevations. The surficial loess formation has been eroded, transported, and reworked from the true loess deposits of western Mississippi. The alluvium and terrace deposits are typical up to approximately 6 to 12 meters thick while the surficial loess is typically only a few meters thick.

The alluvium, terrace deposits and loess are underlain by the highly plastic, highly expansive Yazoo clay, which is over-consolidated and typically stiff to very stiff. The Yazoo formation is comprised of an upper weathered phase 5-10 m. thick and an unweathered phase of over 100 m.

4. Noise

The area is primarily of suburban setting with rapid growth in residential and general commercial area. The majority of noise being generated is by vehicular traffic. As traffic increases with the planned growth in the areas, the noise pollution would slightly increase.

D. Socio-Economic Environment

In early 1990, Madison was the fastest growing county in the State of Mississippi. Its nearness to Jackson and easy access via I-55 fuel the growth. The County with a population of 74,674 has experienced a growth of 38.8% from 1990 to 2000. The project is located in the City of Ridgeland. Ridgeland is Madison County's largest City with a population of approximately 15,000, and projected to increase by 2.5 fold by the year 2020. The Commercial hub of the county, Ridgeland is home of Northpark Mall and a wide range of retail businesses. The project site is entirely on National Park Service property. The primary growth outside the park in the near vicinity is the low density residential, retail and general commercial. This area is experiencing rapid growth due to proximity to employment growth in nearby Jackson.

E. Cultural Resources

The Natchez Trace Parkway was established on May 18, 1938 to commemorate the historical significance of the Old Natchez Trace, a primitive trail stretching some 500 miles through the wilderness from Natchez, Mississippi to Nashville, Tennessee. The Natchez Trace Parkway was designated as the corridor for the Natchez Trace National Scenic Trail in 1983 and as a National Scenic Byway-All American Road in 1995. The Mississippi Department of Archives and Historic Resources, Historic Preservation Division, reviewed the cultural resources assessment request for this project and determined that no properties listed in or eligible for listing in the National Register of Historic Places. The Department also stated that they were not aware of any potential of this undertaking to affect Indian cultural or religious sites.

1. Archeological Resources
   No known or previously identified archaeological resources exist within the proposed construction areas.
2. Historic Resources
   No historic resources are known to exist within the proposed construction areas. The bridges proposed for replacement are not historic.

F. Visitor Use and Experience

Natchez Trace Parkway provides opportunities for recreational activities such as: camping, picnicking, hiking, walking, auto tours, swimming, boating, horseback riding, exhibits, biking, seasonal crafts festivals and demonstrations.
In 1999, the Natchez Trace Parkway estimated the number of recreational visits

along the Parkway at 6,392,961.

G. Comparison of Alternatives

The following chart summarizes and compares the likely results of implementing the No Action Alternative and the Preferred Alternative as they relate to the environment.

Factor	No Action Alternative	Build Alternative
Wetlands	No change from the existing condition is anticipated.	There would be no impact in the Rice Road bridge site. Minor impacts to wetlands are anticipated in the Old Canton Road bridge site.
Vegetation	No change from the existing condition is anticipated.	Some vegetation would need to be removed on the east side of the Old Canton Road and west side of the Rice Road bridge sites, and with the connector road.
Protected Species	No change from the existing condition is anticipated.	Per USF&WS, no listed, proposed or candidate species are present within the project area.
Air Quality	Minor impact may occur due to increased congestion.	Minor temporary impacts are anticipated during construction. Air quality is anticipated to improve once improvements are complete.
Soils/Geology	No change from the existing condition is anticipated.	Approximately 27,000 m^3 roadway excavation would be required for roadway widening and connector road.
Water Quality	No change from the existing condition is anticipated.	No change from the existing condition is anticipated
Birds, Fish & Wildlife	No change from the existing condition is anticipated.	Birds, Fish and Wildlife may flee the area temporarily during construction due to noise, but is expected to return to the area after the completion of construction.
Historic & Cultural Resources	No change from the existing condition is anticipated.	Per MS, Dept of Archives and History, no historic or cultural resources area anticipated to be affected with the proposed project area.
Noise	No Change from the existing conditions is anticipated.	Minor temporary impacts during construction are anticipated.
Hydrology	No change from the existing condition is anticipated	No significant change from the existing conditions is anticipated.
Visitor Use and Recreation	No change from the existing condition is anticipated	Minor impacts would occur due to closure of a section of Parkway during bridge replacements. A traffic control plan for closure and detour will be implemented during construction.
Land Use	No change from the existing condition is anticipated	Temporary loss of green space for detour construction. No long-terms impacts are anticipated.
Transportation	Increased congestion is anticipated due to tremendous growth in the area.	Minor temporary impacts would occur due to closure of Parkway during construction. Traffic flow is expected to improve once construction is complete and additional travel and bike facilities are available.
Economics	Increased congestion and longer commuting time. Impacts on County's planned infrastructure.	The project is expected to have positive impact on the local economy with the improved infrastructure.
Cumulative Impacts	Impacts on County's ability to complete the infrastructure needed for economic development.	No change from the existing condition is anticipated

IV. Environmental Effects

A. General Environmental Effect

1. No Action Alternative

No change form the existing conditions is anticipated.

2. Build Alternative

No change from the existing conditions is anticipated.

3. Conclusions

No impact to the general environmental setting is anticipated under either alternative. No impairment to the Park's general environmental setting would occur.

B. Natural Resources

1. Vegetation

a. No Action Alternative

No change from the existing conditions is anticipated.

b. Build Alternative

The existing species along the Parkway would remain relatively the same; however, some vegetation would be lost with the widening of Old Canton Road and Rice Road. The construction of a temporary connector road (120 meter long and 3 meter travel lanes), from Post Road to the Parkway, to maintain access to the traffic during construction of Rice Road, would require clearing of approximately 1050 sq. meter area. Any areas disturbed for grading, utilities relocation, and connector road construction would be revegetated with native species. All embankment material used to construct the connector would be removed to match the existing conditions.

c. Conclusions

Under the Build Alternative, minor impacts to vegetated areas would result. Any areas cleared for grading, construction activities and utilities relocation would be reseeded and replanted. The area cleared for the connector road would be restored to the existing conditions. No impairment to the Park's vegetation would occur.

2. Threatened and Endangered Species

a. No Action Alternative

No change from the existing conditions is anticipated.

b. Build Alternative

According to the U.S. Fish and Wildlife Service, no impacts to listed, proposed or candidate threatened and endangered species is anticipated.

c. Conclusions

According to the U.S. Fish and Wildlife Service, no impacts to listed, proposed or candidate threatened and endangered species is anticipated. Neither alternative would result in impairment to threatened or endangered species within the Park.

3. Birds, Fish and Wildlife Resources

a. No Action Alternative

No impacts to the wildlife species and aquatic habitats within the project area would occur under this alternative.

b. Build Alternative

The temporary disturbance associated with construction may cause some animals and birds to temporarily flee the project area. Road kill may slightly increase due to higher speed and increased width of the roadway resulting in longer crossing time. Clearing of approximately 1050 sq. meters of area for the connector road would have temporary effects on the wildlife. The area cleared for the connector road would be restored to the existing conditions. However, it is assumed that once construction is complete all species, which may currently inhabit the area, would return. No long-term adverse impacts to birds, fish or wildlife species are anticipated under the Build Alternative.

c. Conclusions

No impairment to the Park's resources in birds, fish, or wildlife would occur.

4. Wetlands

a. No Action Alternative

No impacts to wetlands would occur under the No Action Alternative.

b. Build Alternative

No impact to wetlands would occur in the Rice Road project site. The Old Canton Road site has jurisdictional wetlands within the project site. A minor wetlands encroachment (approximately 3800 sq.ft. and 19 metric tones of riprap) is anticipated within the grading and culvert installation area. A Wetlands Statement of Findings is not anticipated, as this encroachment would be less than 0.10 acres. A COE General Permit may be required.

c. Conclusions

The Build Alternative would not result in any filling or encroachment of wetlands in the Rice Road project site. The Old Canton Road site would have minor encroachment within grading and utilities relocation in this area. No impairment of the Park's wetland resources would occur under either alternative.

C. Physical Environment

1. Air Quality

a. No Action Alternative

Air quality levels may deteriorate slightly over time due to increased congestion in the area.

b. Build Alternative

Air quality levels would remain essentially in the same condition as they are under present conditions. The temporary impacts due to construction are not expected to be significant. Construction activities would be conducted in accordance with the Federal Highway Administration's Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, 1996; and would require compliance with all applicable local, state and federal regulations. The improved roadway section may result in reduction of congestion, thus slightly improving the air quality at the project build.

c. Conclusions

Temporary minor impacts to air quality levels may occur during construction under the Build Alternative. However, no long-term impacts are anticipated. A minor improvement in air quality may be

achieved due to congestion reduction with the improved road network. No impairment to the Park's air quality would occur under either alternative, minor improvement to air quality may be achieved under the build alternative.

2. Water Quality

a. No Action Alternative

No change from the existing conditions is anticipated under the No Action alternative.

b. Build Alternative

Potential short-term impacts to Brashear Creek, tributary to Ross Barnett Reservoir, may occur due to erosion during construction; however, best management practices would be utilized to minimize these impacts. Should this alternative be selected, a sediment and erosion control plan, including best management practices, would be prepared by the Federal Highway Administration, and included in the final construction plans.

c. Conclusions

No impairment to the Park's water quality would occur under either alternative.

3. Soils/Geology

a. No Action Alternative

No change from the existing conditions is anticipated.

b. Build Alternative

Under the Build Alternative, there would be approximately 6 acres of clearing and grubbing, to construct additional lanes, lengthening of bridge spans, and construction of the temporary connector road. The temporary connector road from Post Road to the Parkway is necessary to maintain access to the Parkway during construction of Rice Road. Total roadway excavation including the temporary connector would be approximately 27150 cubic meters. All disturbed area would be stabilized upon completion of construction.

c. Conclusions

The Build Alternative would require approximately 6 acres of

clearing of the area for the roadway widening and associated grading. Minor temporary erosion and stream siltation can be expected during construction. However, best management practices would be applied and sediment and erosion control plans would be developed as part of the construction plans. No impairment to the Park's resources would occur under either alternative.

4. Noise

a. No Action Alternative

No change from the existing conditions is anticipated.

b. Build Alternative

Noise levels may increase temporarily during construction. Park visitors in the immediate vicinity of the construction area would be subject to the noise pollution during construction period.

c. Conclusions

No impairment to the Park's resources would occur, under either alternative.

D. **Cultural Resources**

1. Archeological Resources

As outlined in 36 CFR, par 800, regulations issued by the Advisory Council on Historic Preservation implementing section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470 et seq.), the potential impacts on cultural resources must be addressed. Under the "Criteria of Effect" (36 CFR Part 800.9)(a), Federal undertakings are considered to have an effect when they alter the character, integrity, or use of a cultural resource, or qualities that qualify a property for listing on the National Register of Historic Places.

The National Park Service consulted with the Mississippi State Historic Preservation Office (SHPO) to ensure that the NPS operation, management, and administration provide for the site's cultural resources in accordance with the intent of National Park Service policies and with Section 106, 110, and 111 of the NHPA, as stated in the 1990 programmatic agreements among the National Park Service, the Advisory Council on Historic Preservation, and the National Council on Historic Preservation Officers. Under Stipulation D of the programmatic agreements, all undertakings that are not considered programmatic exclusions, or are not included in the plans reviewed under the former programmatic memoranda of agreement, would

be reviewed in accordance with 36 CFR

a. No Action Alternative

No impacts to archaeological resources are anticipated under this alternative.

b. Build Alternative

Mississippi Department of Archives and History, Historic Preservation Division has determined that there is a very remote possibility of any unrecorded cultural resources being encountered during construction. In case such resources are encountered, construction activities would cease, and State Historic Preservation Division would be contacted for further action.

c. Conclusion

No impairment to the Park's archaeological resources would occur under either alternative.

2. Historic Resources

a. No Action Alternative

No historic resources would be disturbed or lost under the No Action Alternative.

b. Build Alternative

The Build Alternative is not anticipated to impact historic resources.

c. Conclusions

No impairment to the Park's historical resources would occur under either alternative.

E. Socio-Economic Environment

1. No Action Alternative

The area is experiencing rapid growth. Rapid employment growth and retail activities in the area would create congestion and loss of time and productivity in the area. The No Action Alternative would hinder the planned County and City infrastructure.

2. Build Alternative

The Build Alternative could have a positive impact on the socio-economic environment for the local economy. The area is experiencing fast growth. To maintain study growth in the area there is a vital need to improve infrastructure. This alternative would allow localities to improve their planned transportation infrastructure.

3. Conclusions

The Build Alternative may have positive impacts on the socio-economic environment. No impairment to the Park's socio-economic environment is anticipated under either alternative.

F. Visitor Use and Experience

1. No Action Alternative

No change from the existing conditions is anticipated.

2. Build Alternative

There could be minor temporary impacts due to closure of the sections of Parkway during construction. There will be no permanent impacts on the use visitation and use of Parkway.

3. Conclusions

Under the Build Alternative, some inconvenience will be experienced by the visitors, due to closure of the section of Parkway. However, detour and traffic signage plans will be prepared and made part of the construction plans for implementation during construction. Minor increase in noise level would occur temporarily during construction period. No impairment to the Park's resources would occur under either alternative.

G. Energy Requirements and Conservation

Neither alternative would have a significant impact on energy resources or conservation issues.

H. Natural or Depletable Resources

The use of natural resources would be required under the Build Alternative in order to complete construction. Fossil fuels used in construction are depletable. However, no significant natural resources would be depleted.

I. Cumulative Impacts

Cumulative impacts are those impacts on the environment that result from the incremental effect of the project when considered with interrelated past, present, and reasonably foreseeable future projects. This bridge replacement study coincides with efforts to complete the unfinished portions of the Parkway near Jackson and Natchez, several Parkway rehabilitation projects, and a study to construct a multi-use trail at the southern end of the Parkway.

1. No Action Alternative

The No Action Alternative would have little impact on future Park development plans. Under the No Action Alternative, the Park as a whole would remain relatively unchanged. However, this alternative would prohibit the full implementation of planned widening of Old Canton and Rice Roads. The planned trail network would not be constructed. The increased development in the area would result in traffic congestion and safe merge and traffic flow and underutilization of the other road network.

2. Build Alternative

The Build Alternative would allow the localities to complete the planned widening of their major arterials, Old Canton Road and Rice Road. This alternative also enhances multi-modal system with the completion of planned local trail network and compliments existing and planned multi-use trail on the Parkway. The total cumulative impacts associated with this project are anticipated to be minor considering the limited extent of the proposed construction. Impacts associated with the removal of vegetation and water quality would not be significant, nor would the short-term disruption to the wildlife species. This alternative would not prohibit or disrupt plans for completing the unfinished segments of the Parkway, or performing any needed repairs along existing sections. The Parkway would remain as existing 2-lane facility.

3. Conclusions

The No Action Alternative maintains the present conditions of the Park. However, the localities would not be able to complete their planned infrastructure to accommodate the existing growth and planned land use in the area.

Under the Build Alternative the effects are minimal. The widening of the bridges spans to accommodate the wider roads under the Parkway would not change the character of the Parkway or would have long-term impacts. Any adverse impacts like closure of Parkway would only occur during construction and are not likely to continue once construction is complete. The localities would be able to complete the planned widening of Old Canton Road, Rice Road and multi-use trails. No impairment to the Park's resources

would occur.

J. Irreversible and Irretrievable Commitment of Resources

Approximately $5,500,000 in TEA-21, Section 1214(P) funds, has been set aside for planning, design, and construction. Should design and construction of the Build Alternative occur, these resources would be consumed.

K. Unavoidable Adverse Environmental Effects

No significant adverse environmental effects are anticipated. The clearing of approximately 10 acres of the sparsely vegetated area for additional lanes, bike trail and grading on Rice Road and Old Canton Road will be required in the vicinity of the bridges. The area cleared for grading, detour road and drainage work would be stabilized and restored with native vegetation. The improvement to local road network outweighs the adverse impacts.

L. Local Short-Term Uses and Maintenance/Enhancement of Long-Term Productivity

Short-term and long-term maintenance costs on the Parkway are unaffected by the proposed action. There would be minor decrease in maintenance costs for the bridges in the short-term.

M. Compliance with Environmental Requirements

The Natchez Trace Parkway currently operates under the direction of the approved 1987 General Management Plan/Environmental Assessment for Natchez Trace Parkway (GMP/EA). Management objectives identified within the GMP direct the maintenance and upgrading of roadways and associated bridges in order to provide for a positive visitor experience and to ensure effective parkway operations. However, construction and maintenance must be compatible with and sensitive to the resources for which the parkway was set aside.

The 1982 Surface Transportation Assistance Act established the Federal Lands Highway Program (FLHP), which distributes funds from the federal motor fuel tax revenues for the construction and rehabilitation of federal roads, including roads in units of the National Park System. The NPS has developed a plan for a long-term program of road improvement and maintenance with the intent to preserve and extend the surface life of principal park roads, and improve their safety. The FHWA coordinates the design, construction, and maintenance of these roads in cooperation with the NPS. As intended by the Act, the FHWA is designing the proposed Rice Road and Old Canton Road bridges, and construction would occur using 2002 FLHP funds.

The proposed action to replace the Rice Road and Old Canton Road bridges is

entirely consistent with the Natchez Trace Parkway management documents.

1. *National Environmental Policy Act (NEPA)*

   This Environmental Assessment (EA) and resultant decision documents provide disclosure of the decision making process and potential environmental consequences of the alternatives. This EA will be available for a 30-day public review and comment period, after which the NPS will decide if the proposed action is significant enough to prepare an Environmental Impact Statement (EIS). If an EIS is not required, the NPS's Southeast Regional Director may sign a Finding of No Significant Impact (FONSI). Together this EA and the public notification of the FONSI will conclude the NEPA compliance for this project.

2. *Endangered Species Act of 1973*

   Section 7 of the Endangered Species Act directs all Federal agencies to use their authority in furtherance of the purposes of the Act by carrying out programs for the conservation of rare, threatened, and endangered species. Federal agencies are required to consult with the U. S. Fish and Wildlife Service to ensure that any actions authorized, funded, and/or carried out by the agency does not jeopardize the continued existence of any listed species or critical habitat.

   Informal consultation pursuant to the Endangered Species Act was initiated on January 16, 2002, when a letter was sent to the U. S. Fish and Wildlife Service inquiring whether any Federal or state listed or candidate threatened or endangered plant or animal species or any other special status plant or animal species occur in the project area. No known listed or candidate species are known to inhabit the area proposed for road rehabilitation. The U.S. Fish and Wildlife Service responded on January 22, 2002, with the determination that the proposed action "is not likely to affect Federally listed, proposed or candidate species."

3. *Clean Water Act of 1972*

   This Act seeks to restore and maintain the chemical, physical, and biological integrity of the nation's water by a variety of means. Section 404 of the Act directs wetlands protection by authorizing the Army Corps of Engineers to prohibit or regulate, through a permit process, discharge of dredged or fill material into the waters of the United States, including wetlands. Actions described in this document comply with the requirements of Section 404 of the Clean Water Act and all other applicable federal, state, and local agencies.

   Water quality in the project area would be protected by the implementation

of erosion and sediment controls, such as silt fencing, straw bales, and sediment traps, as needed. Due to the potential for disturbance of archeological resources, silt fencing would only be used near streams and where steeper grades are present and not used in flatter areas with minimal shoulder disturbance. Reseeding and mulching would quickly stabilize disturbed areas. Staff at the Federal Highway Administration (FHWA) would prepare the *Erosion and Sediment Control Plan* for inclusion in the construction plans.

4. *National Historic Preservation Act of 1966*

This Act requires Federal agencies to establish programs for evaluating and nominating properties to the National Register of Historic Places, and to consider the effects of undertaking a proposal on listed or eligible properties. Section 106 mandates that Federal agencies take into account the effects of their actions on properties listed or eligible and to give the Advisory Council on Historic Preservation a reasonable opportunity to comment on said actions, if appropriate.

Although the NPS has a programmatic agreement with the State Historic Preservation Officer (SHPO), the NPS consulted with their office to specify the level of disturbance with the proposed action. In a letter dated January 2002, SHPO determined that the proposed action in accordance with the 36 CFR 800.4 and 800.5 regarding the identification of historic properties and assessment would have no properties listed in or eligible for listing in the National Register of Historic Places will be affected.

All ground disturbing activities associated with the project would be reviewed for archeological needs. Completion of compliance with Section 106 of the National Historic Preservation Act would be carried out in accordance with the National Park Service's Cultural Resources Management Guidelines (RM-28), and appropriate documentation and consultations undertaken.

Although no adverse effects to cultural resources are anticipated with the implementation of the proposed action, measures would be taken to ensure that adequate protection and consideration of cultural resources are carried out throughout the design and construction phases of the project.

5. *The National Park Service Organic Act of August 25, 1916*

This Act states that the fundamental purpose of national parks is "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." The preferred alternative does not have significant impact on the park resources.

Although no adverse impacts to Park's resources are anticipated at this time under either alternative, measures would be taken to ensure that adequate protection is provided to conserve the scenery and natural resources under the selected alternative.

7. Fish and Wildlife Coordination Act

The Act of March 10, 1934, authorizes the Secretaries of Agriculture and Commerce to provide assistance to and cooperate with Federal and State agencies to protect, rear, stock, and increase the supply of game and fur bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife.

In addition, this act authorizes the preparation of plans to protect wildlife resources, the completion of wildlife surveys on public lands, and the acceptance by the Federal agencies of funds or lands for related purposes provided that land donations received the consent of the State in which they are located.

The amendments enacted in 1946 require consultation with the Fish and Wildlife Service and the fish and wildlife agencies of States where the "waters of any stream or other body of water are proposed or authorized, permitted or licensed to be impounded, diverted ….. or otherwise controlled or modified" by any agency under a Federal permit or license. Consultation is to be undertaken for the purpose of "preventing loss of and damage to wildlife resources."

The 1958 amendments added provisions to recognize the vital contribution of wildlife resources to the Nation and to require equal consideration and coordination of wildlife conservation with other water resources development of programs, and authorized the Secretary of Interior to provide public fishing areas and accept donations of lands and funds.

The amendments also titled the law as the Fish and Wildlife Coordination Act and expanded the instances in which diversions or modifications to water bodies would require consultation with the Fish and Wildlife Service. These amendments permitted lands valuable to the Migratory Bird Management Program to be made available to the State agency exercising control over wildlife resources.

V. **Environmental Commitments**

The No Action Alternative does not meet the purpose and need for the action. Therefore, the Build Alternative is selected as the preferred alternative since it addresses the need for widening of the public roads under and in the vicinity of the Parkway. In order to minimize the environmental impacts associated with the preferred alternative, the following measures are recommended for implementation:

1. An Erosion and Sediment Control Plan be prepared and included in the final construction plans.
2. The final plans minimize the clearing of woody and turf vegetation.
3. The final plans include the traffic control, closure and detour plan for the Parkway.
4. If archeological artifacts are encountered during excavation operations, construction should be halted immediately. The Southeast Archeological Center, the Superintendent of the Natchez Trace Parkway, and the Mississippi Department of Archives and History will be notified immediately.
5. The final construction plans include directions and specifications to the contractor for re-vegetating disturbed areas with non-invasive native plant species.

VI. Environmentally Preferred Alternative

The environmentally preferred alternative is determined by applying the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by Council on Environmental Quality (CEQ) regulations. CEQ regulations provide direction that "[t]he environmentally preferred alternative is the alternative that will promote the national environmental policy as expressed in NEPA Section 101. Generally, this means the alternative that causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves, and enhances historic, cultural and natural resources." Question 6a, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations" (40CFR 1500-1508) Federal Register Vol. 46, No. 55, 18026-18038, March 23, 1981.

VII. **List of Preparers**

The following individuals contributed to the development of this document:

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National Park Service

Robert Felker, Landscape Architect, Denver Service Center

VIII. **Coordination**

As required by NPS policies and planning documents, it is the Park's objective to work with state, federal, and local governmental and private organizations to ensure that the Park and its programs are coordinated with theirs, and are supportive of their objectives, as far as proper management of the Park permits, and that their programs are similarly supportive of Park programs.

Consultation and coordination have occurred with numerous agencies for the development of the alternatives and preparation of the EA. The following people, organizations, and agencies were contacted for information, which assisted in identifying important issues, developing alternatives, and analyzing impacts:

U. S. Fish and Wildlife Service

U. S. Army Corps of Engineers

Mississippi Department of Archives and History

Mayor of Madison

City of Ridgeland

In order to give public and all interested parties a chance to review the EA, it will be noticed for public comments for a minimum of 30 days through local newspapers. During the 30-day period, the EA will be available for review at the Natchez Trace Parkway Headquarters located at the Natchez Trace Parkway, Tupelo, MS 31217-4399. Copies the EA will also be sent to applicable Federal, State, and local agencies for review and comment.

IX. **References**

Final Natchez Trace Parkway- Wetlands and Waters of the U.S., Delineation,Wetland & Environmental Services, Inc., Richmond, VA. August 25, 2001.

Geo-technical Report No. 03-00, Project NPS-NATR 3O14, Natchez Trace Parkway Bridges Over Old Canton and Rice Roads, Federal Highway Administration, Eastern Federal Lands Highway Division, Sterling, VA. August, 2000.

Natchez Trace Parkway General Management Plan, 1987. National Park Service, U.S. Department of the Interior.

Comprehensive Plan for the City of Madison, Mississippi, adopted July 1996.

Year 2020 Comprehensive Plan, the City of Ridgeland, Mississippi, February, 2001.

X. Appendix A – Documentation of Agency Consultation

FHWA letter dated January 16, 2002 to the U.S. Fish and Wildlife Service requesting concurrence on our determination that the Build Alternative is not likely to effect any Federally listed threatened or endangered species, and that the proposed action is in compliance with the Endangered Species Act of 1973.

Letter from the U.S. Fish and Wildlife Service dated January 22, 2002, stating compliance with Section 7 of the Endangered Species Act.

Letter from Mississippi Department of Archives and History, Historic Preservation Division, dated January 8, 2002, stating that it is their determination that "no properties listed in or eligible for listing in the National Register of Historic Places will be affected" with the proposed action.